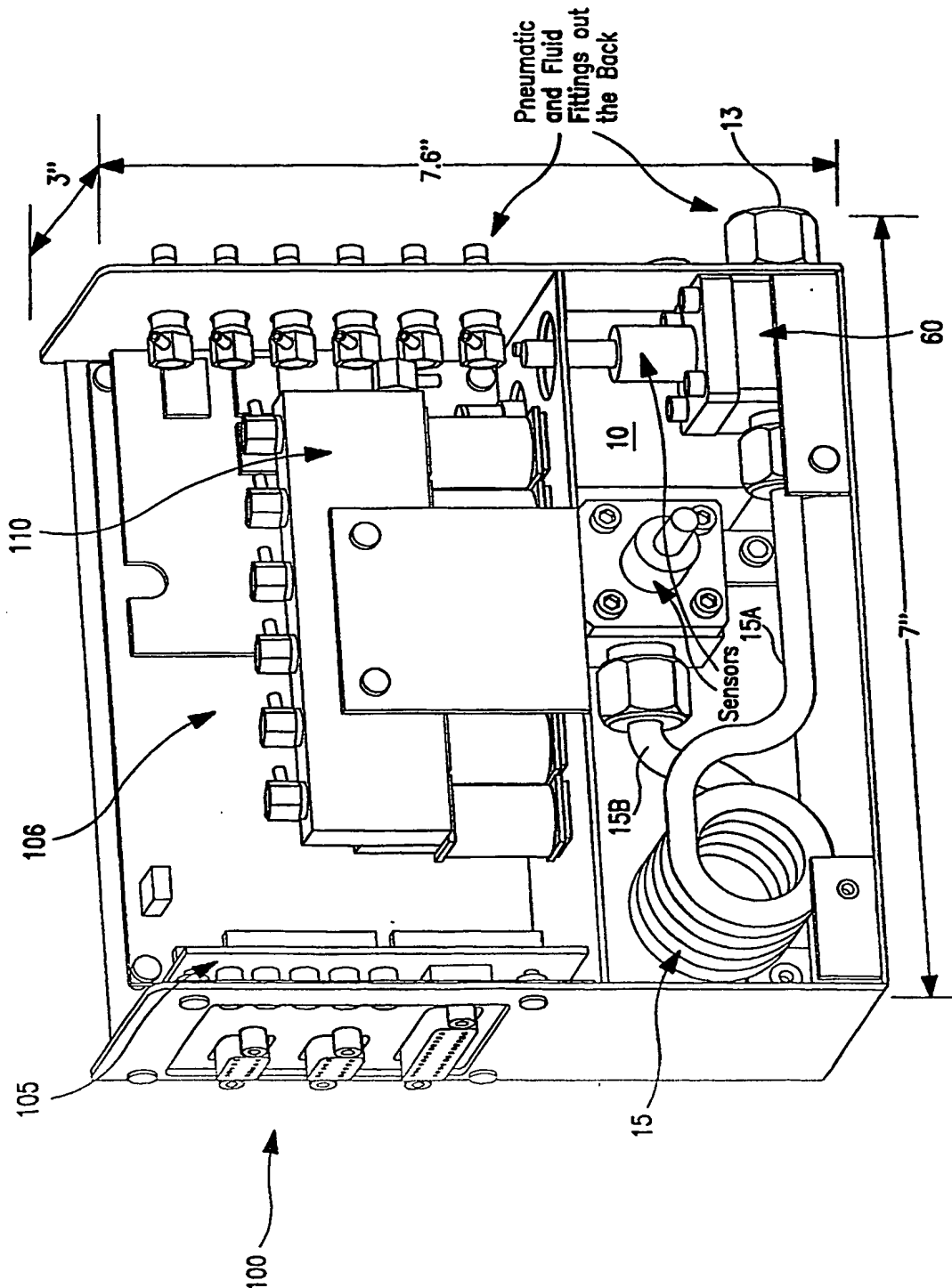


16F



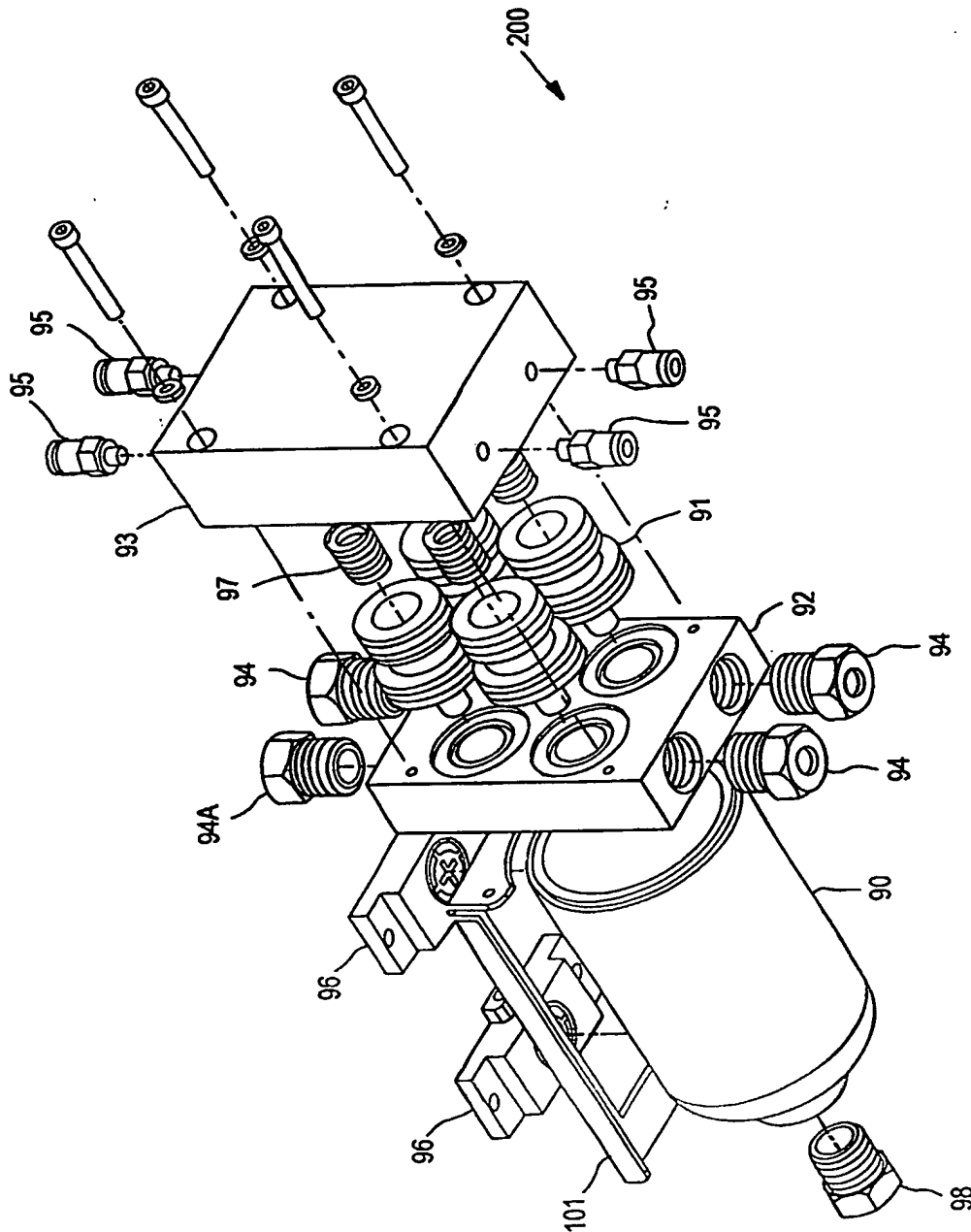
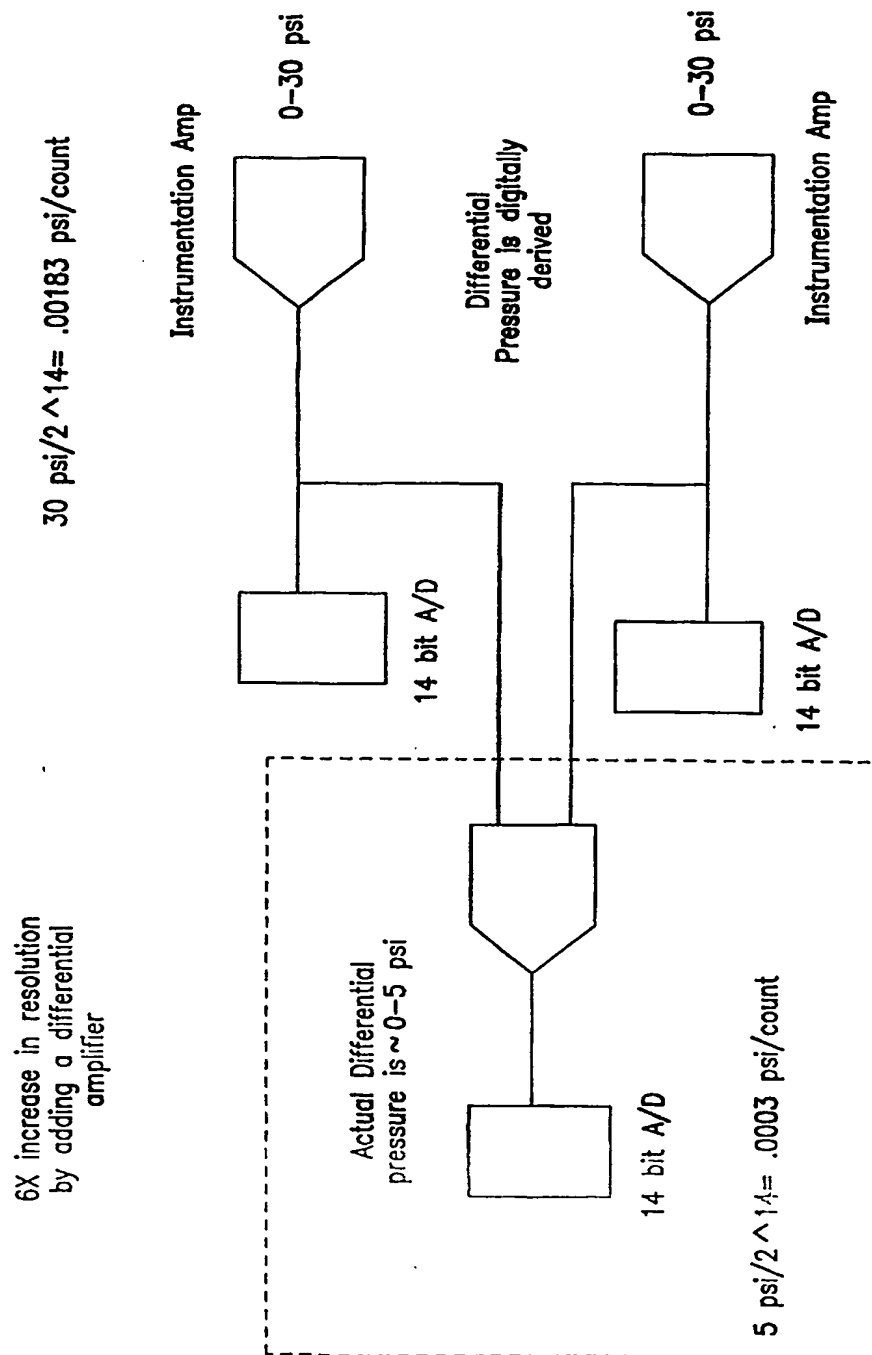


FIG. 3



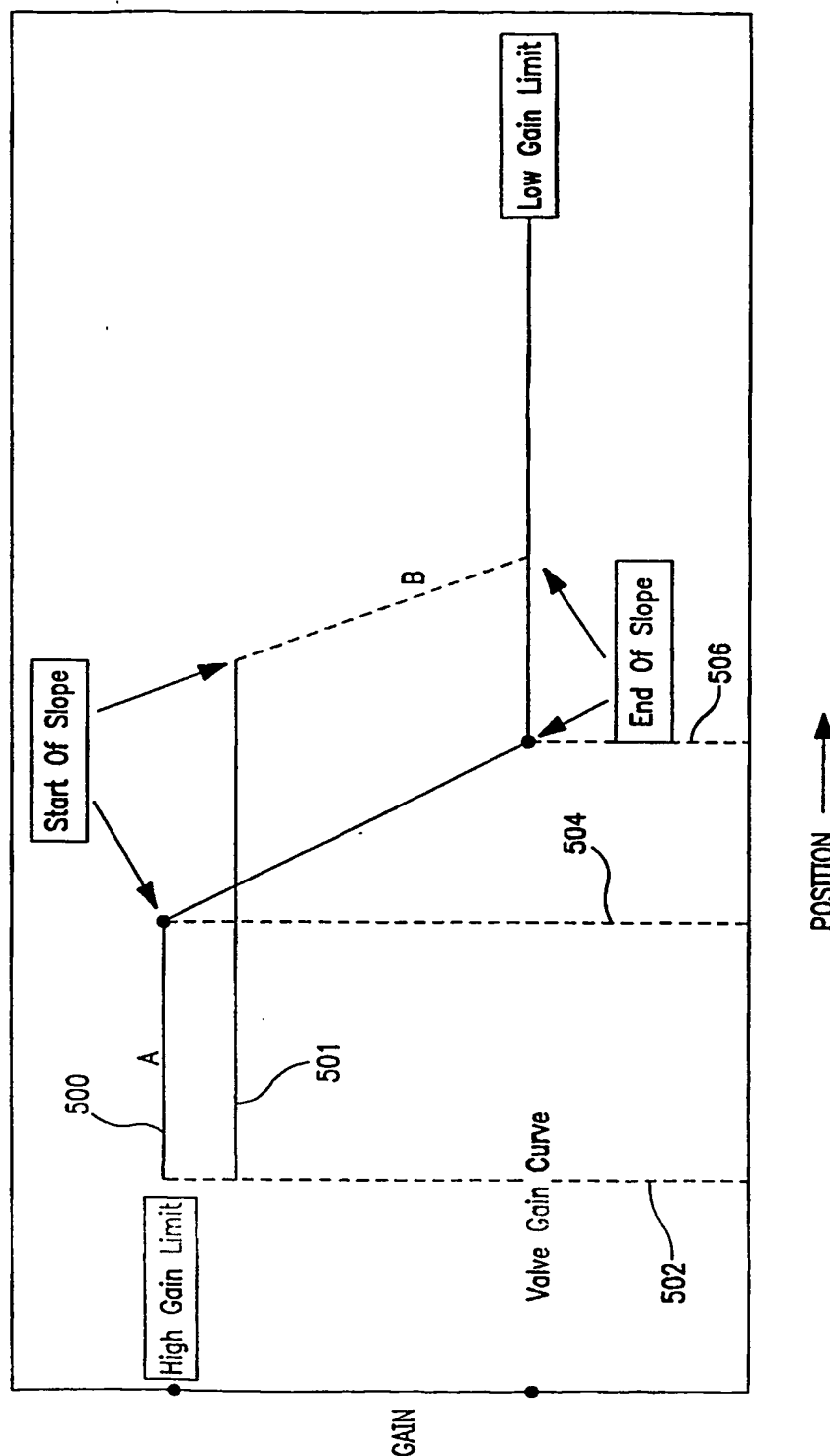


FIG. 5

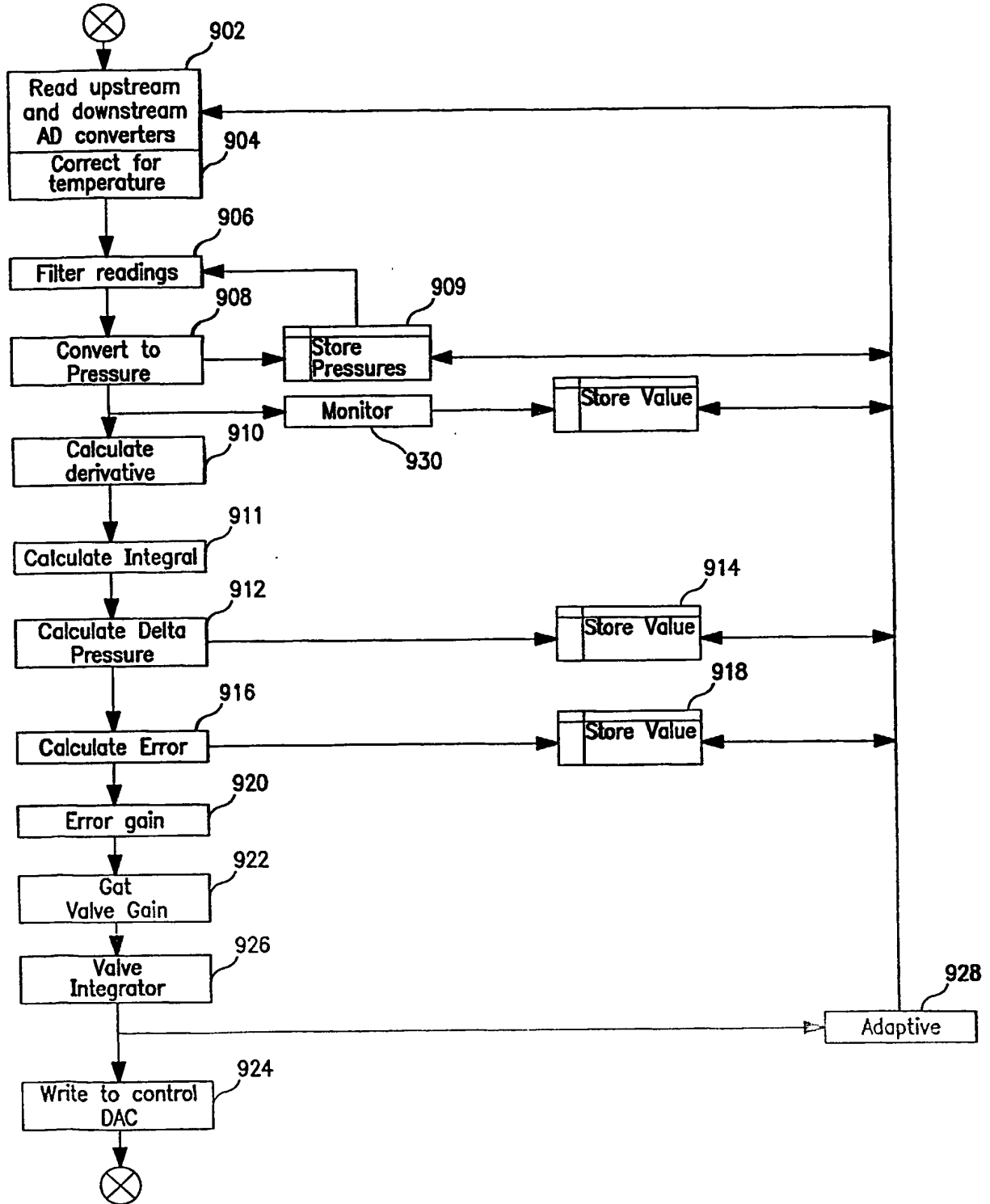


FIG. 6

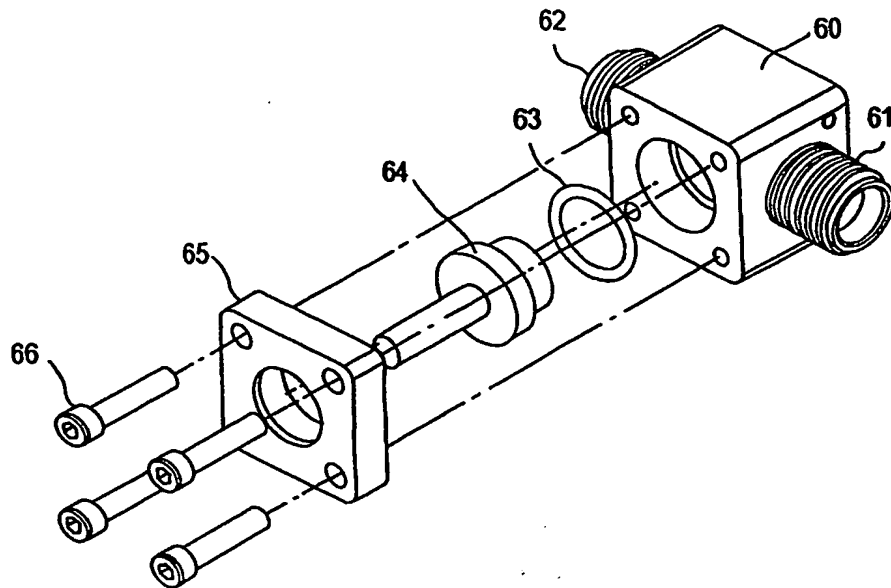


FIG. 7

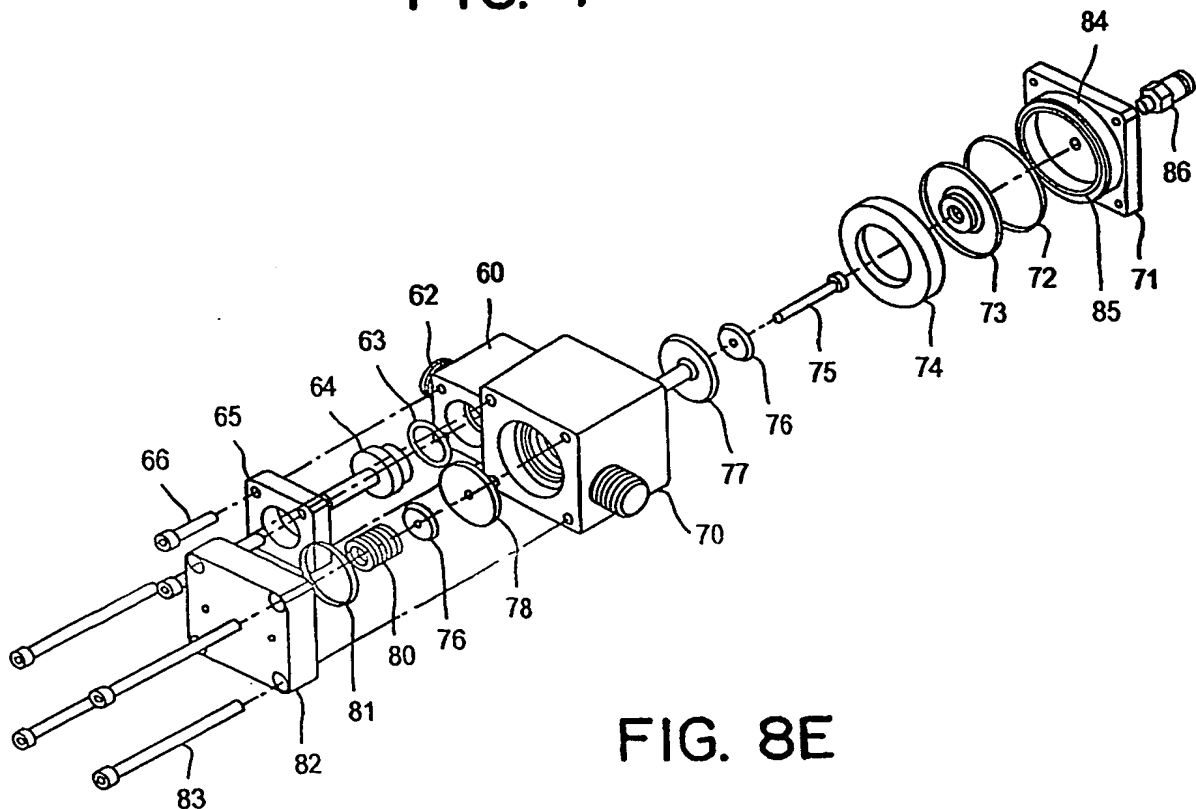


FIG. 8E

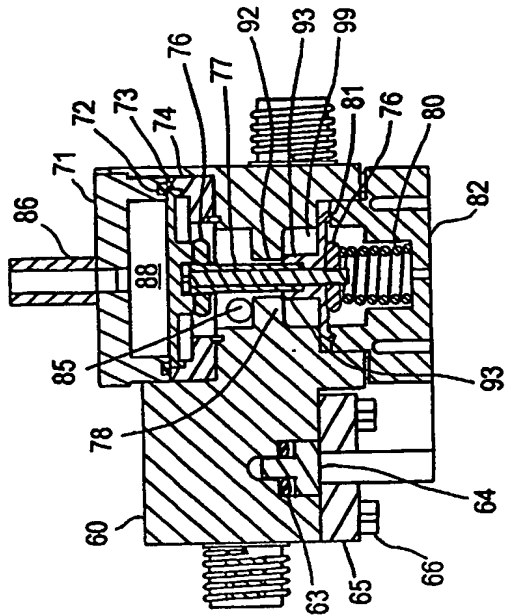


FIG. 8A

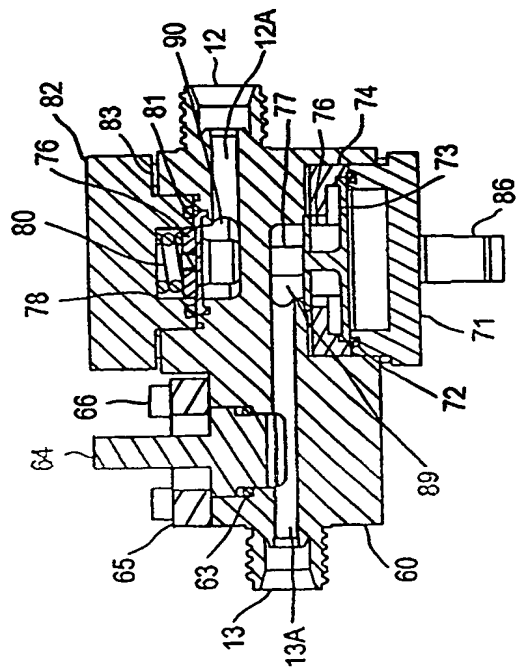


FIG. 8B

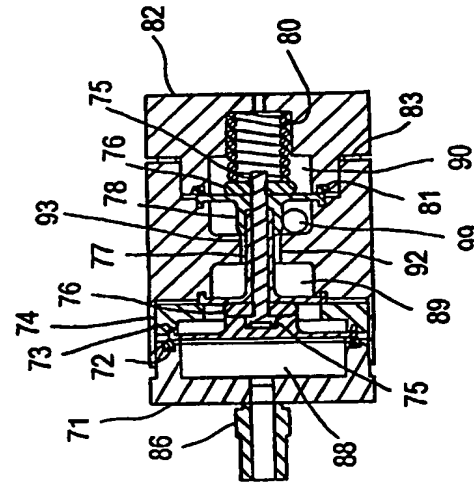
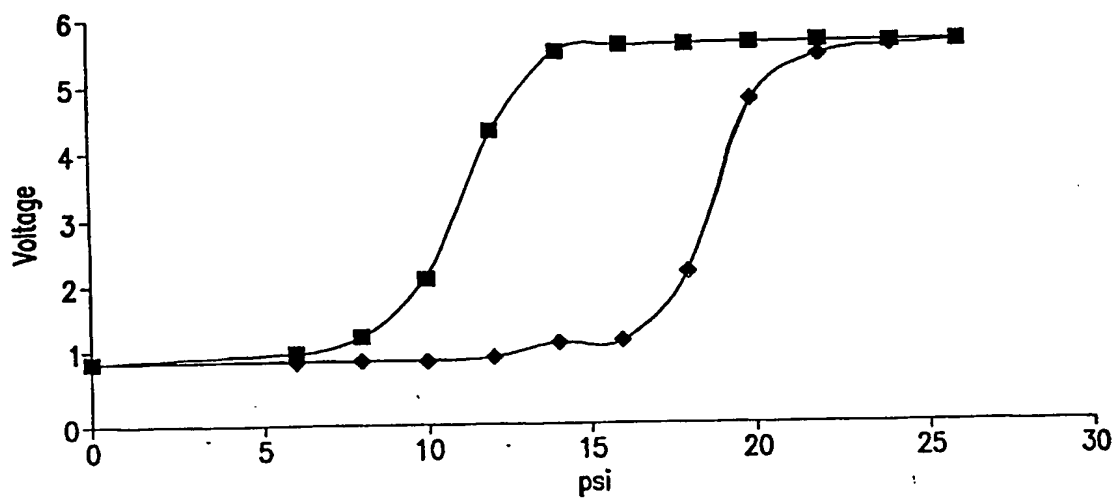


FIG. 8C

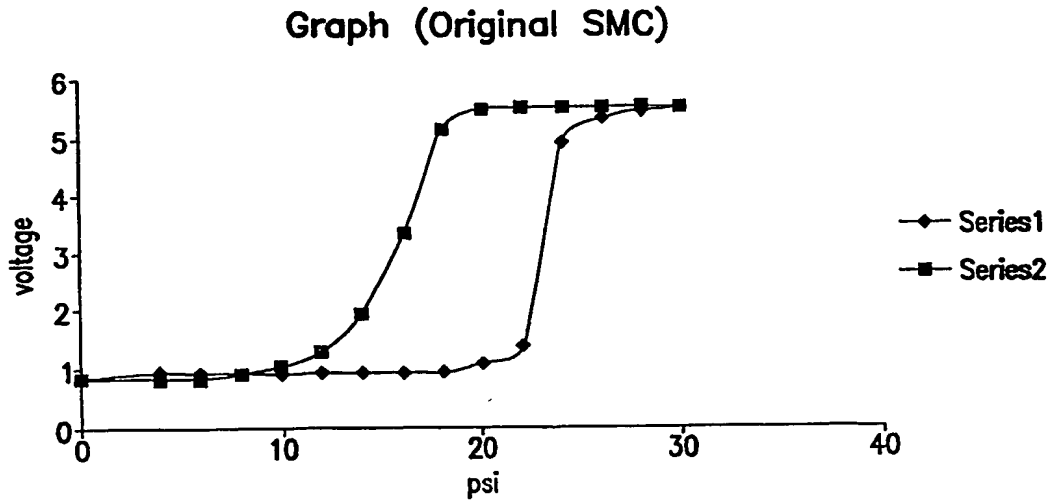
FIG. 8D

Graph 1 (original Furon)



psi	pd1	pd2
0	0.92	0.92
6	0.92	1.04
8	0.92	1.28
10	0.92	2.12
12	0.96	4.28
14	1.16	5.44
16	1.18	5.52
18	2.16	5.52
20	4.68	5.52
22	5.32	5.52
24	5.48	5.52
26	5.52	5.52

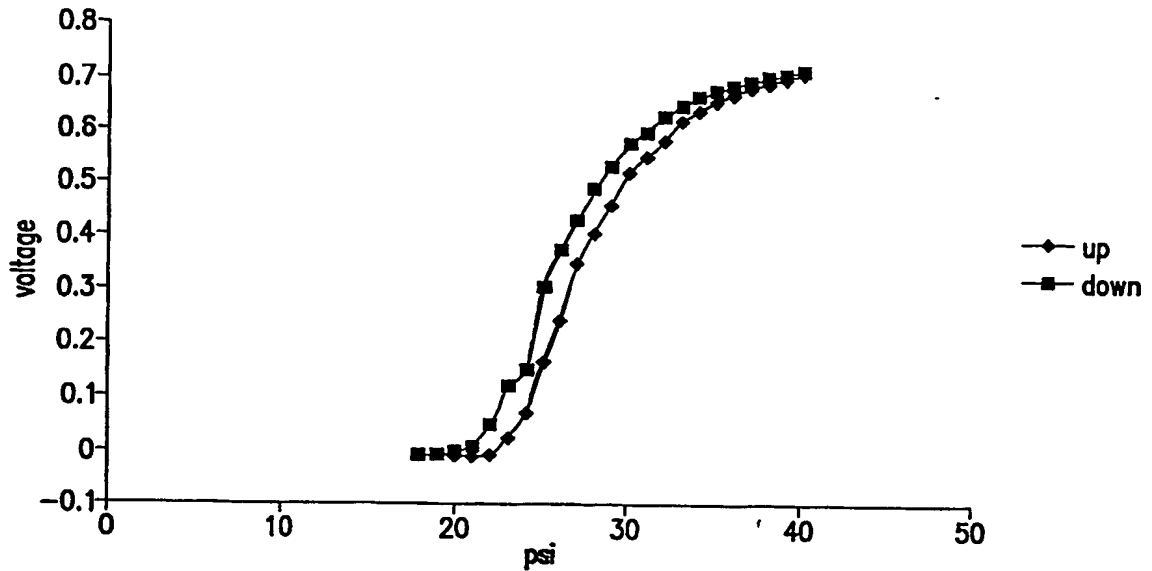
FIG. 9A



psi	psi	psi
0	0.88	0.84
4	0.92	0.84
6	0.92	0.84
8	0.92	0.92
10	0.92	1.04
12	0.92	1.28
14	0.92	1.92
16	0.92	3.32
18	0.92	5.12
20	1.08	5.44
22	1.36	5.48
24	4.88	5.48
26	5.28	5.48
28	5.44	5.48
30	5.48	5.48

FIG. 9B

Valve Test 071901 graph B



hyresistor valve test

psi	up	down
18	-0.011	-0.01
19	-0.011	-0.009
20	-0.011	-0.004
21	-0.011	0.005
22	-0.008	0.046
23	0.022	0.117
24	0.068	0.146
25	0.163	0.3
26	0.24	0.369
27	0.342	0.422
28	0.4	0.482
29	0.45	0.524
30	0.512	0.568
31	0.542	0.588
32	0.572	0.617
33	0.608	0.636
34	0.625	0.654
35	0.643	0.664
36	0.656	0.672
37	0.67	0.68
38	0.678	0.688
39	0.688	0.692
40	0.695	0.7

FIG. 9C

Pressure Drop as a Function of Flow Rate using: -1/4" OD X 40" long coiled tubing
-30-psi Supply Pressure

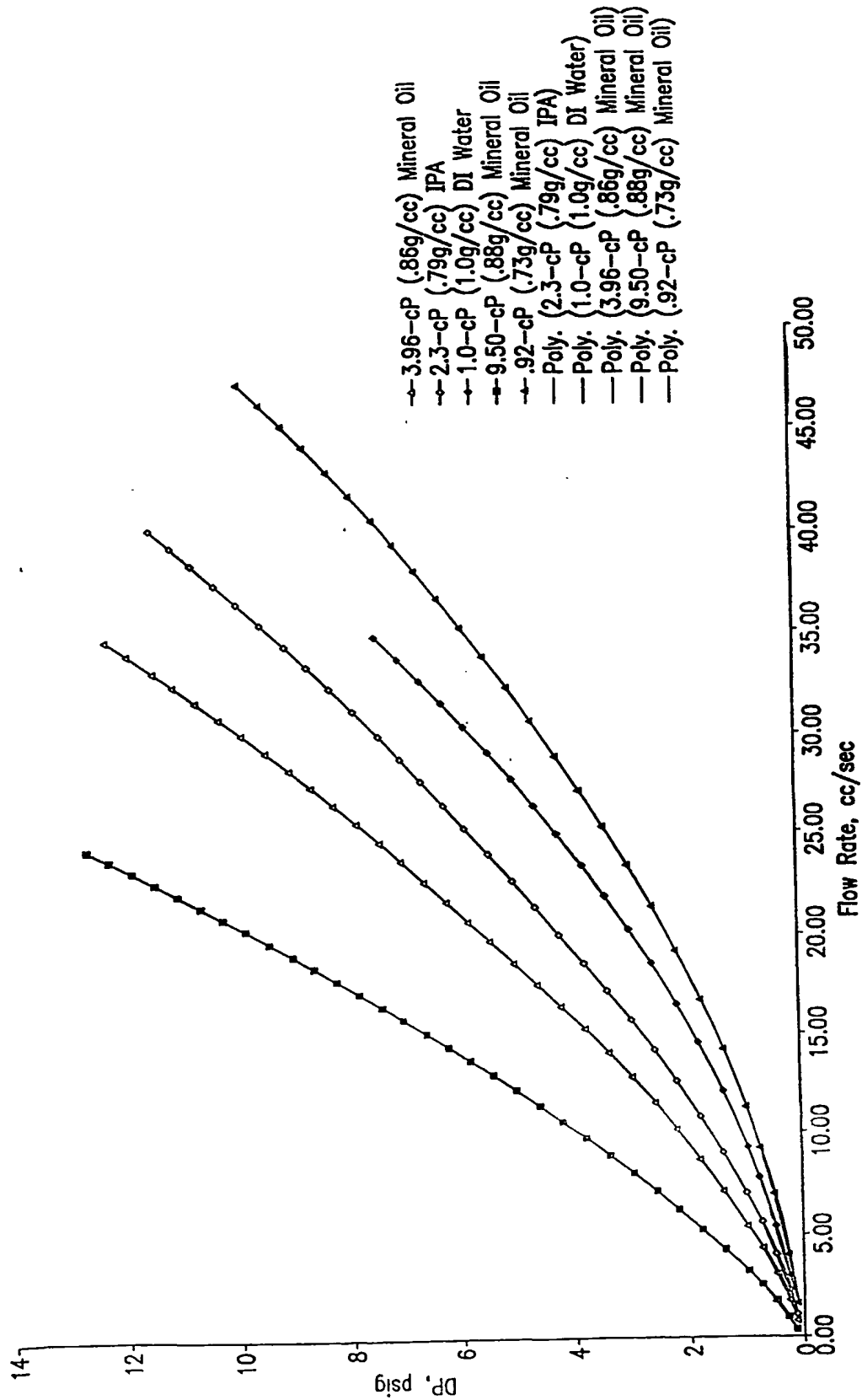


FIG. 10

MIELFM3.xls / 2-propanol-dispense
 40 inch length, 0.058 inch ID, 14 twist PFA coil, T=23 C
 Mass and best fit slopes for various controller setpoints

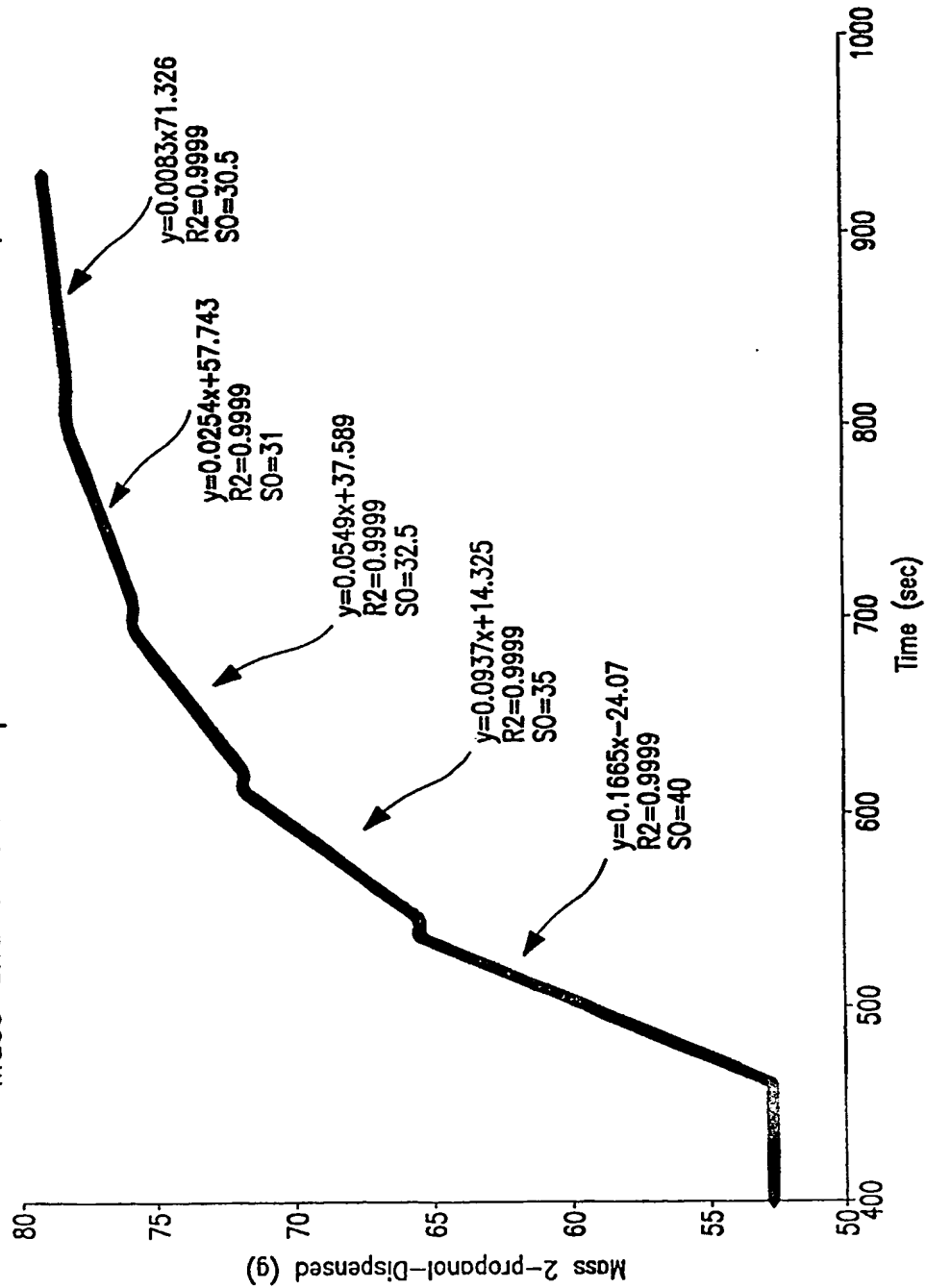


FIG. 11

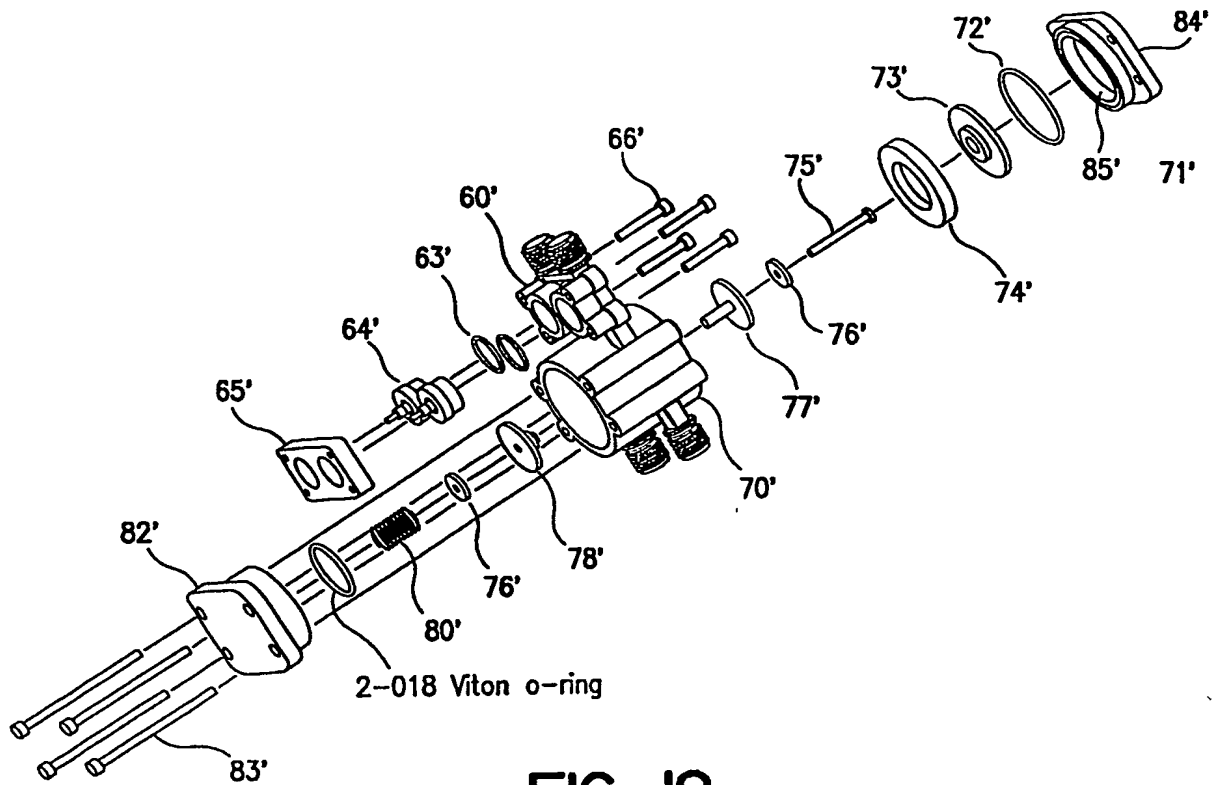


FIG. 12

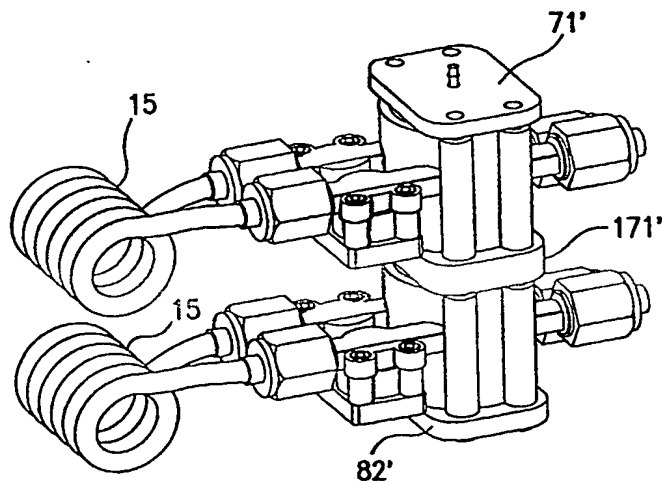


FIG. 15

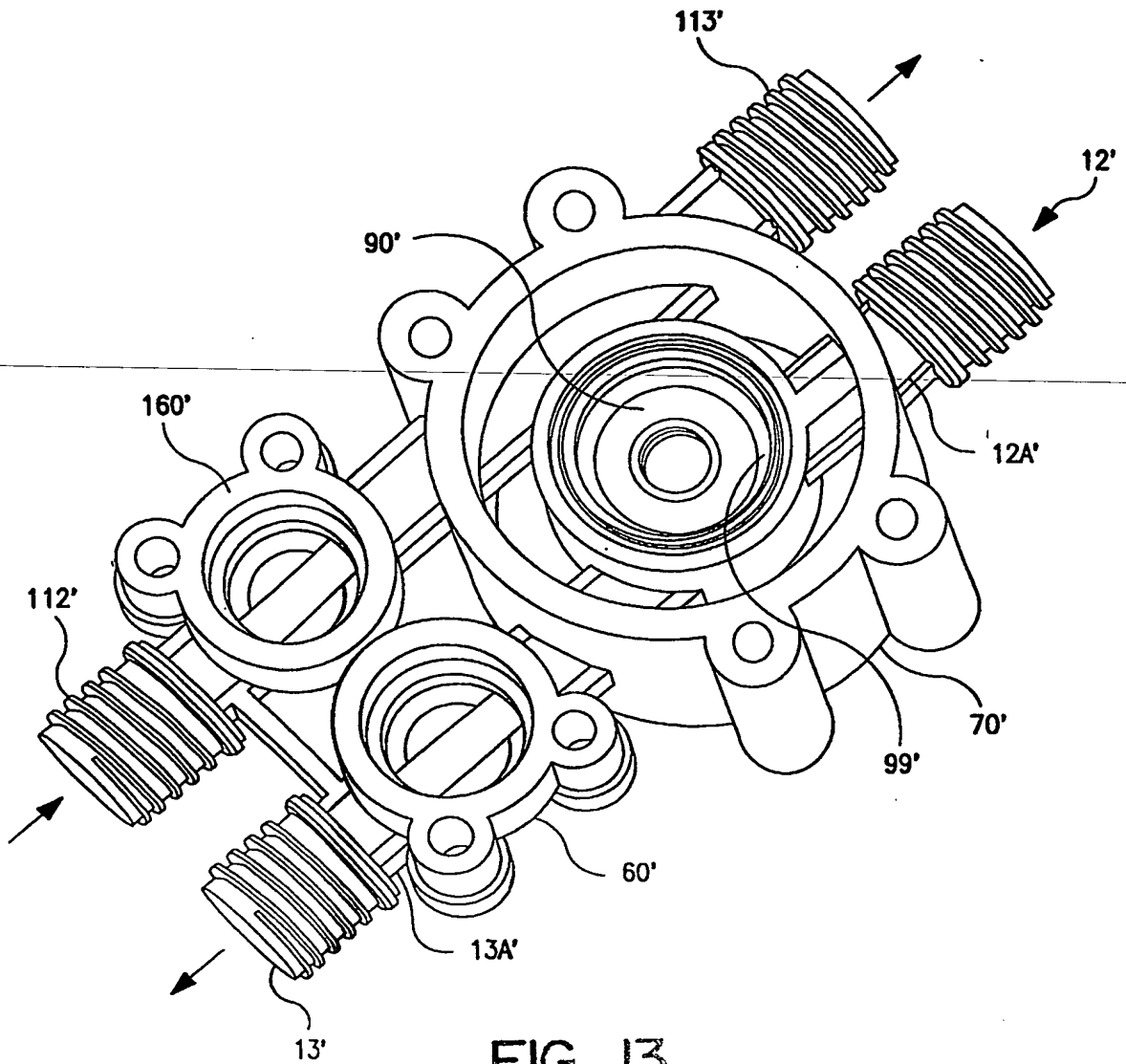


FIG. 13

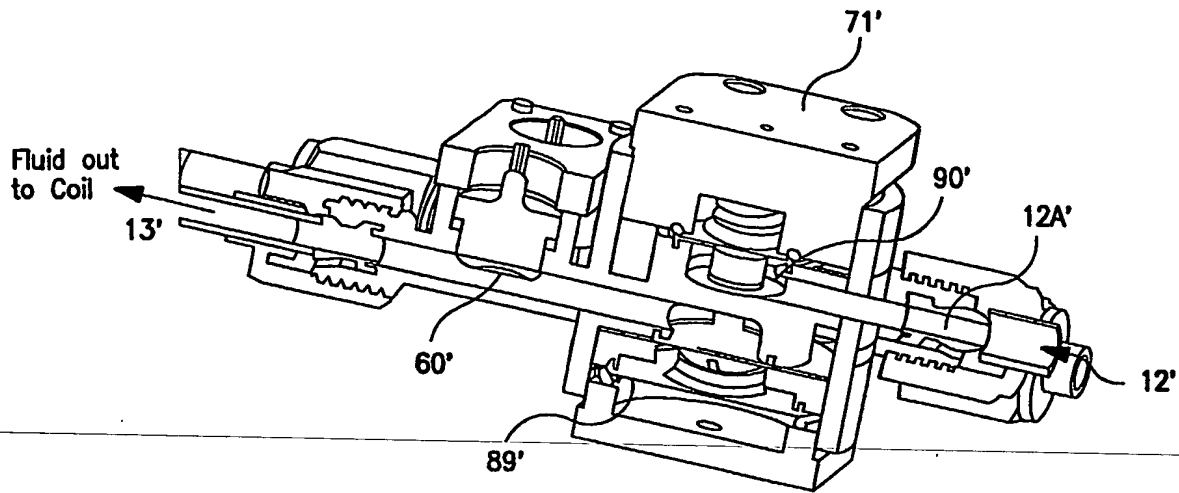


FIG. 14A

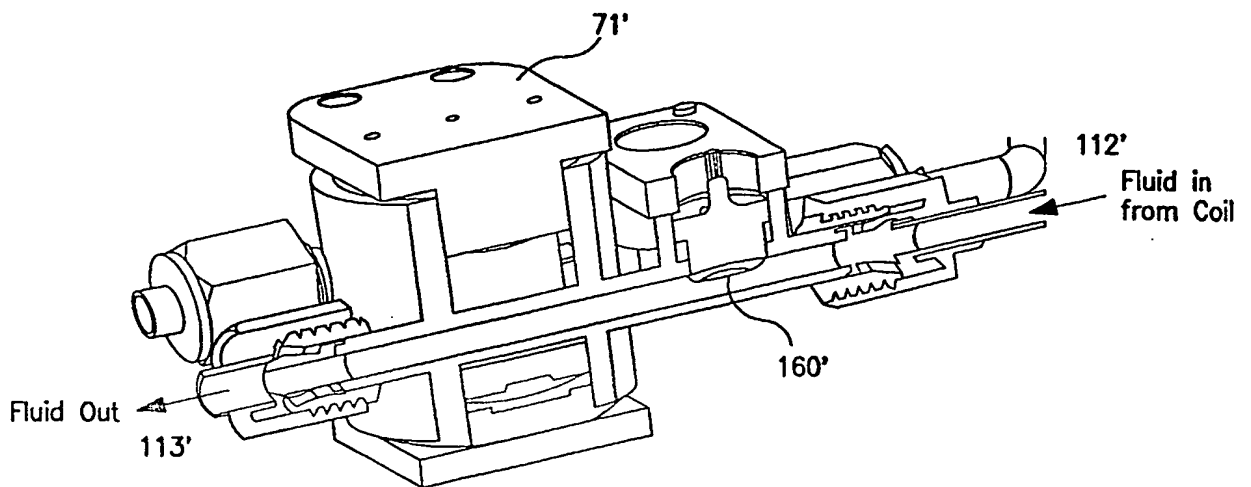


FIG. 14B

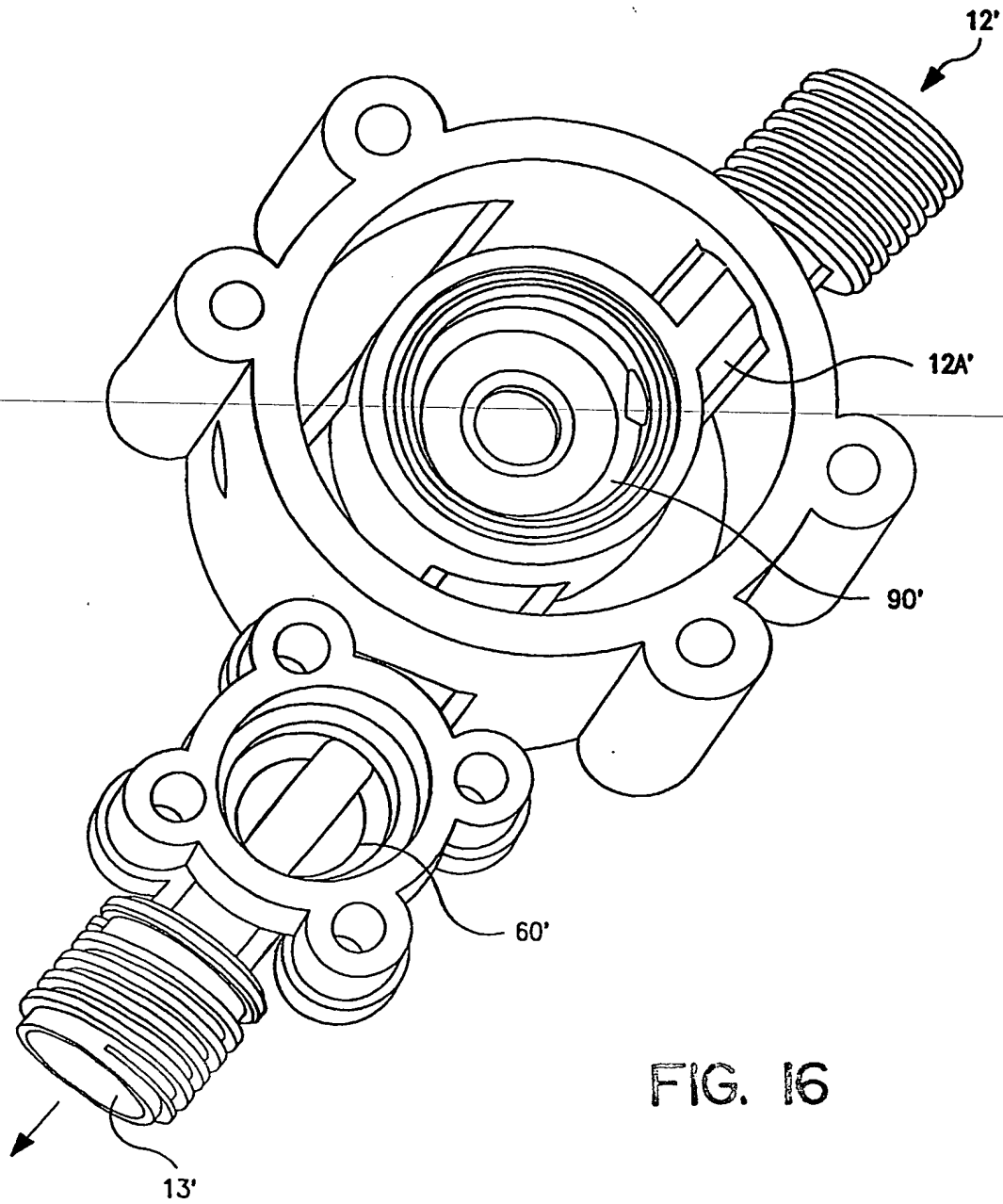


FIG. 16

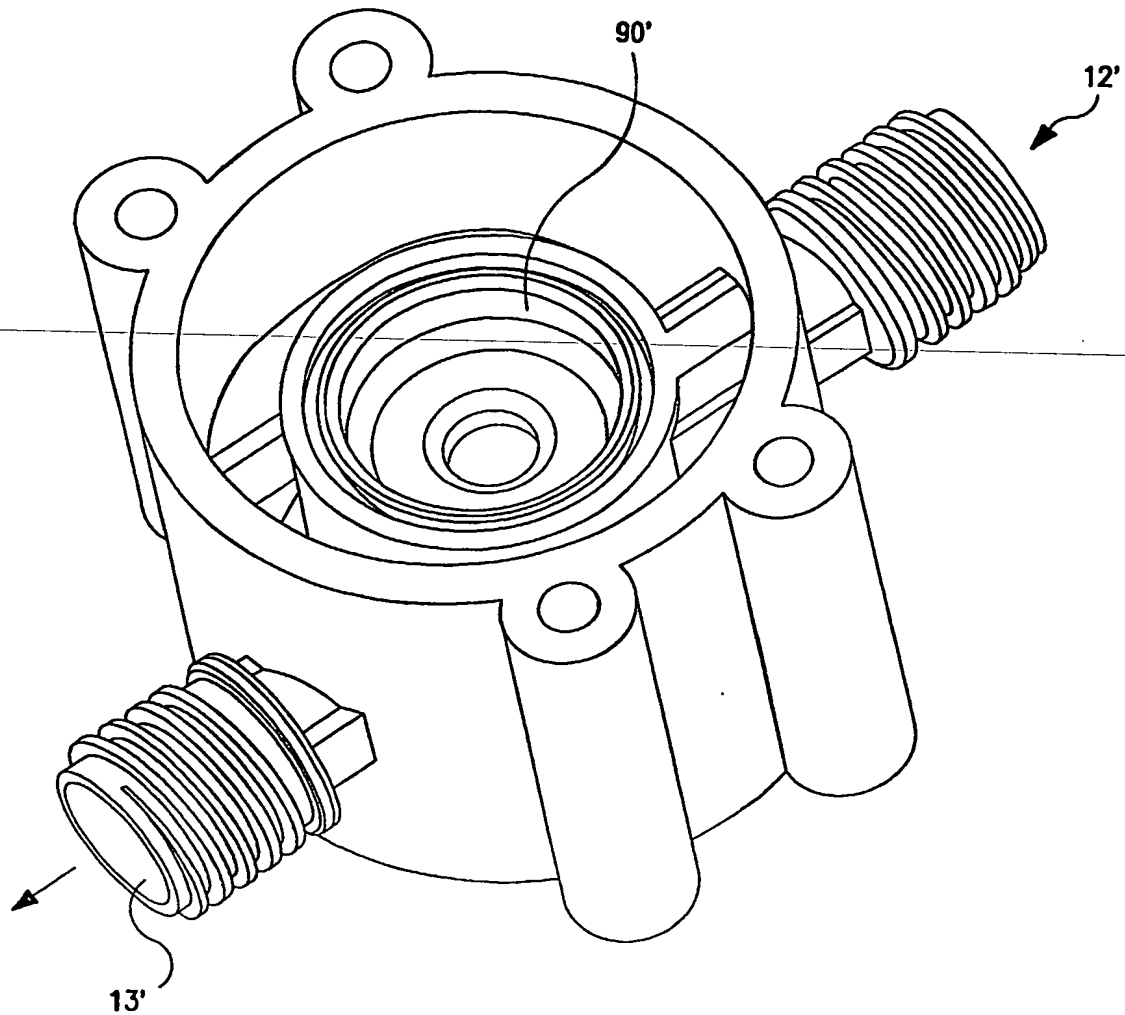


FIG. 17

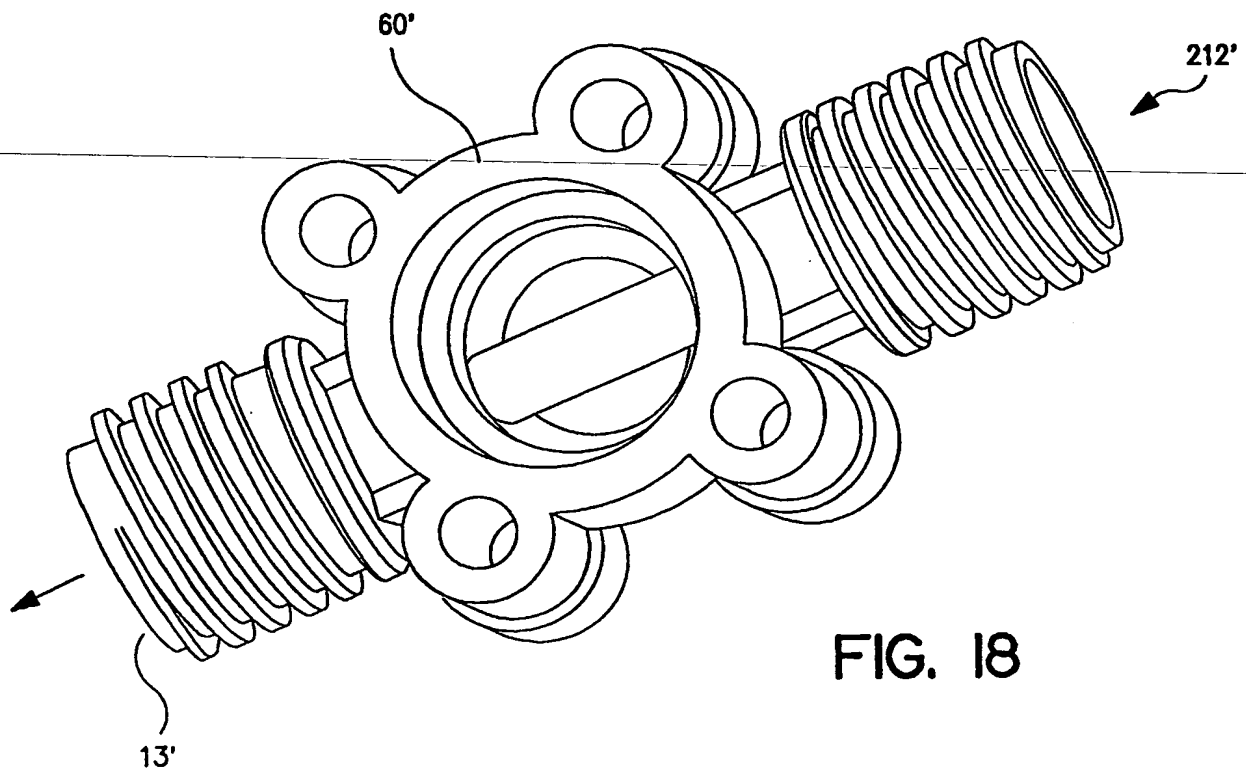


FIG. 18

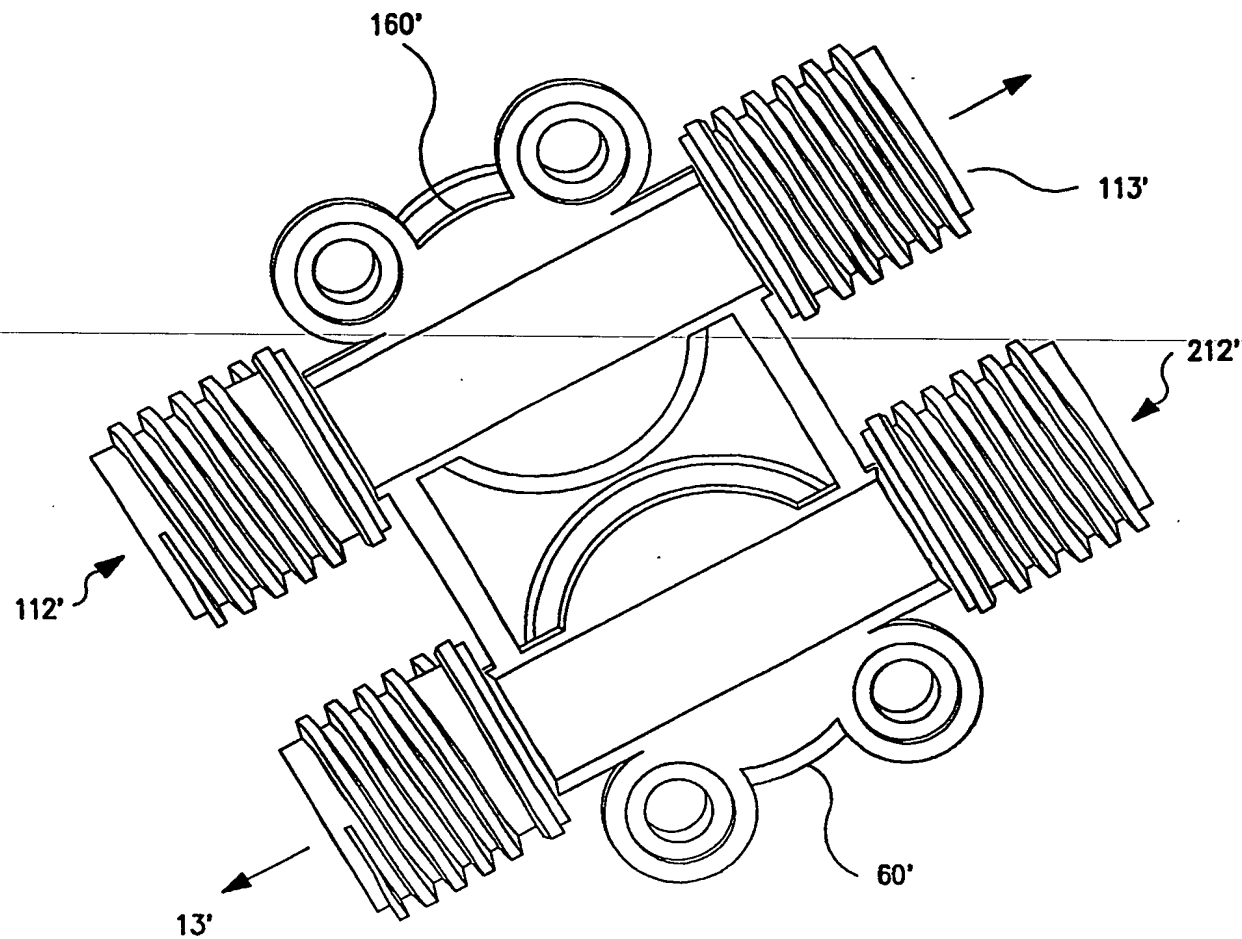


FIG. 19

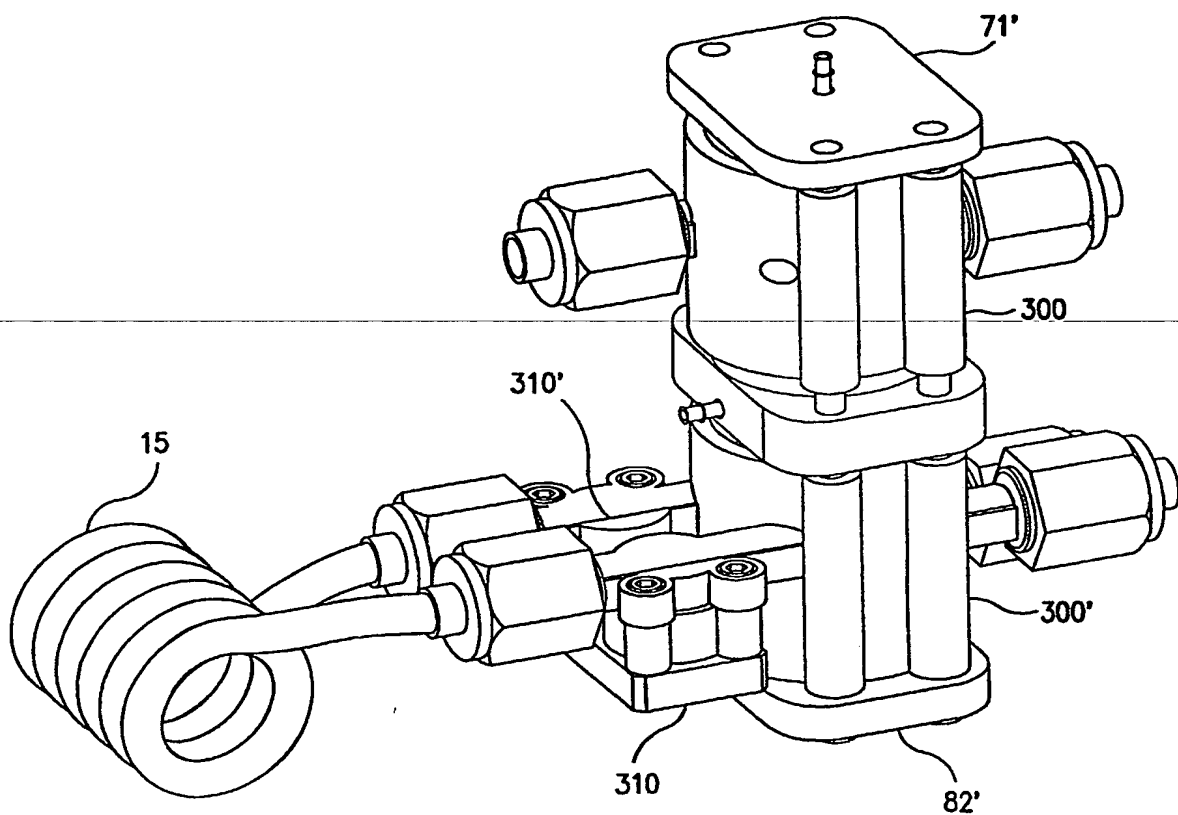


FIG. 20

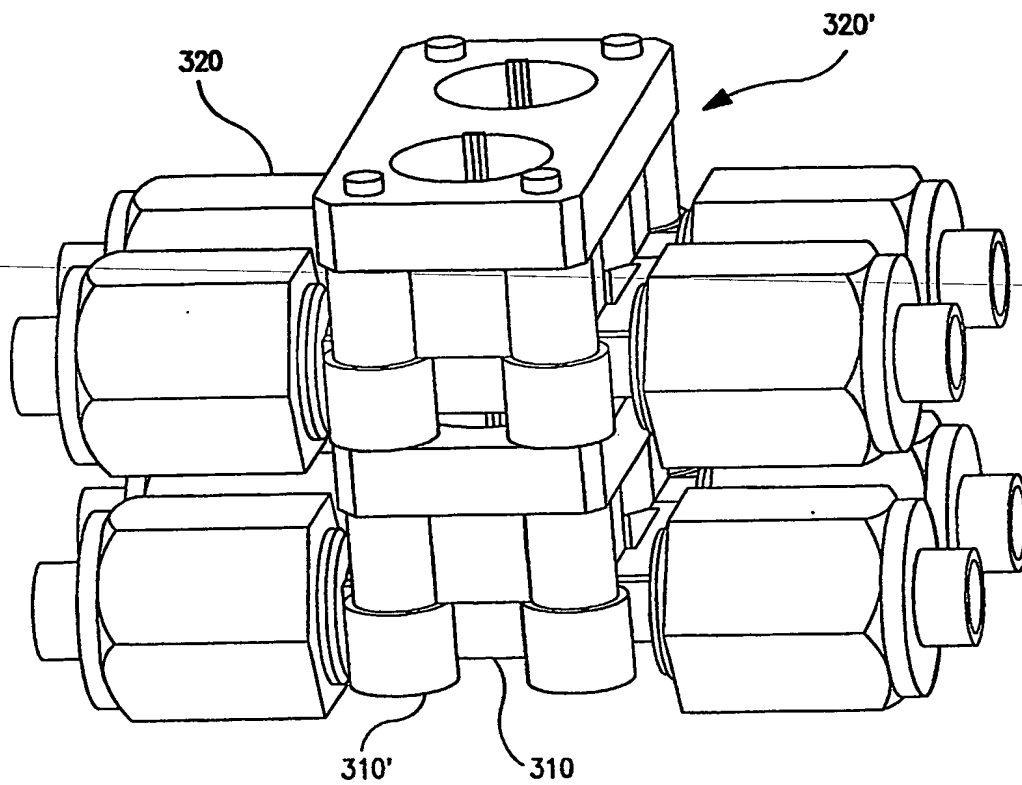


FIG. 21

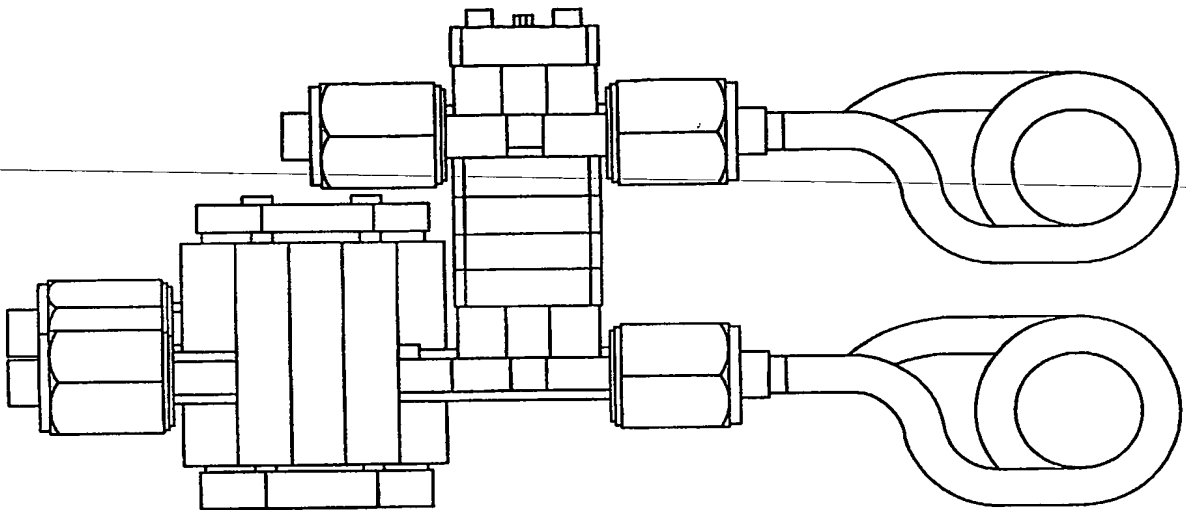


FIG. 22

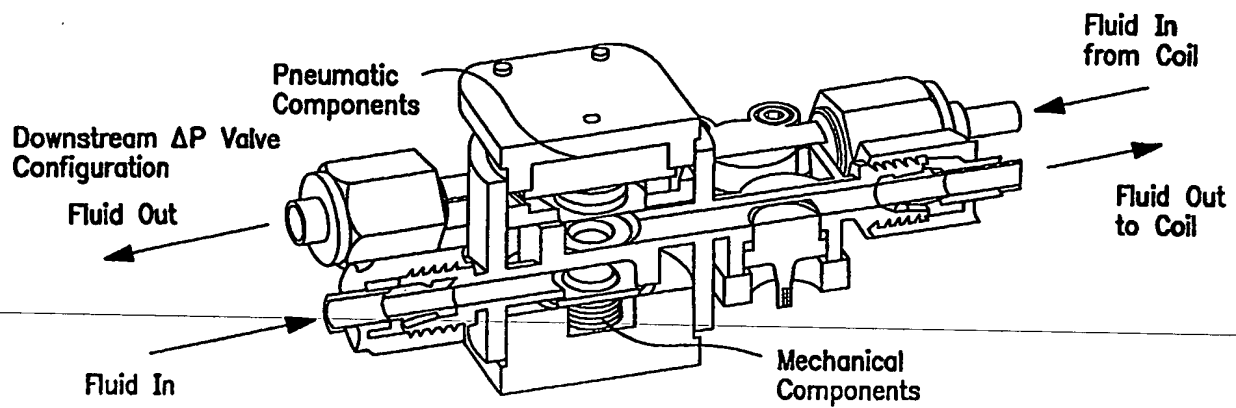


FIG. 23A

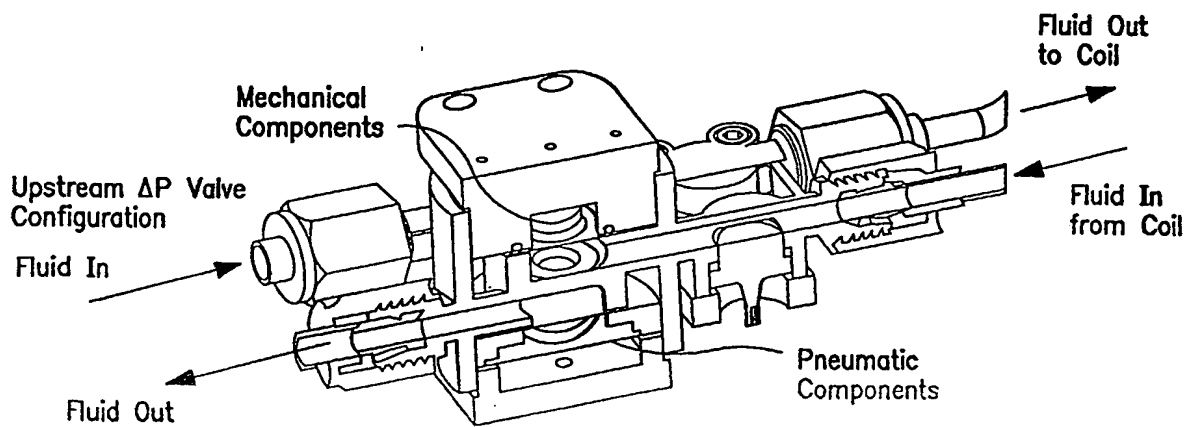


FIG. 23B

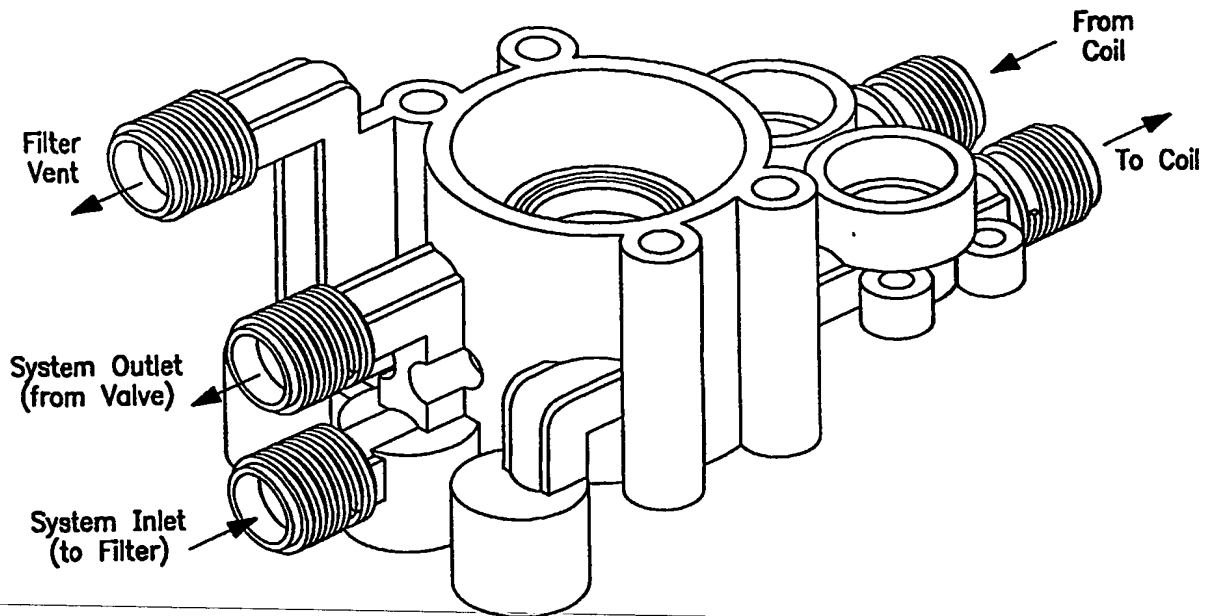


FIG. 24A

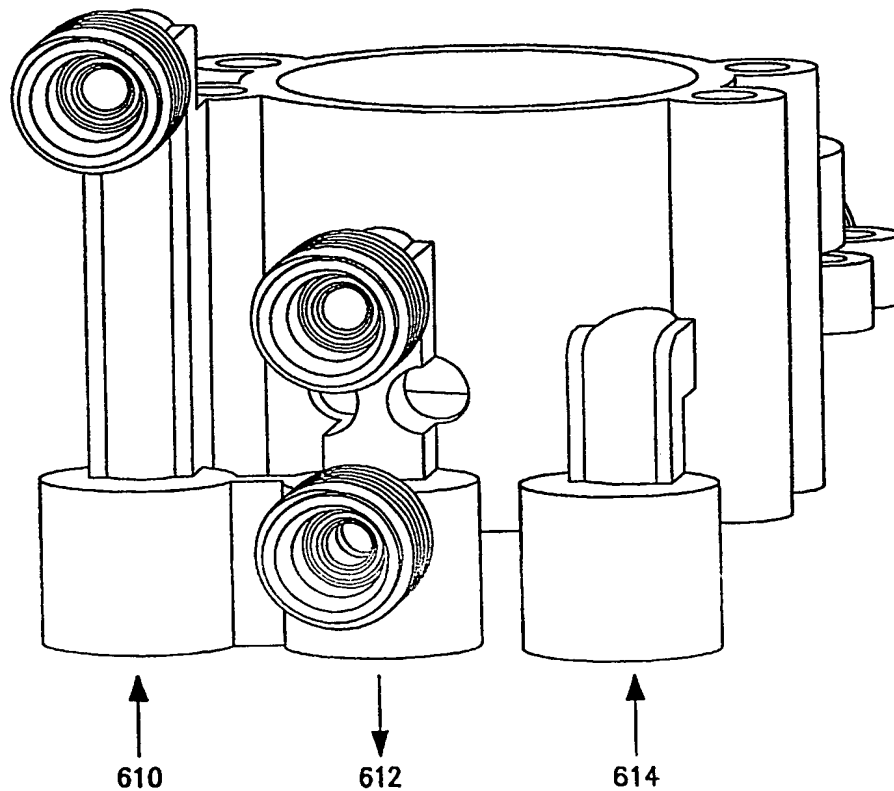


FIG. 24B

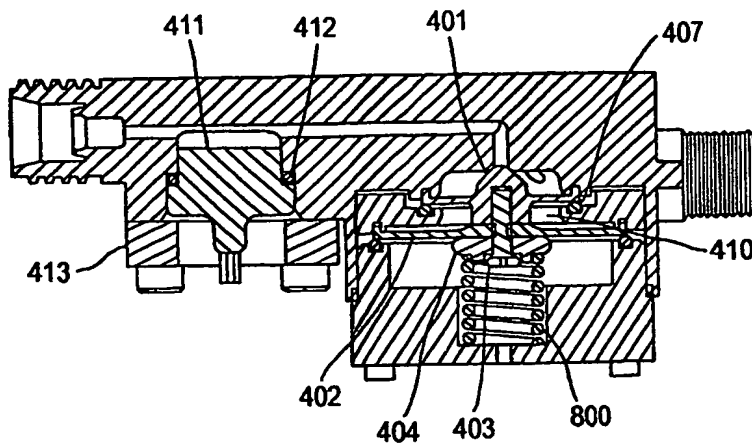


FIG. 25A

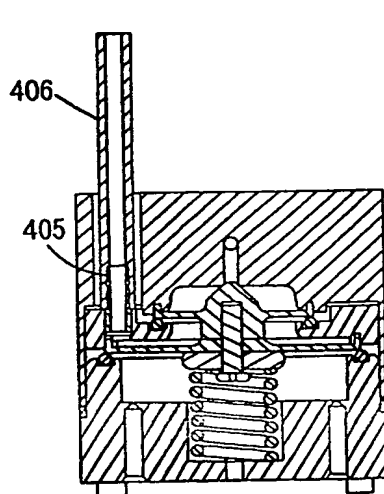


FIG. 25B

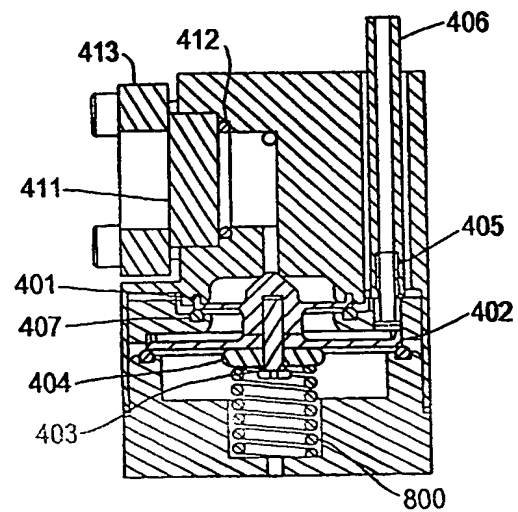


FIG. 26

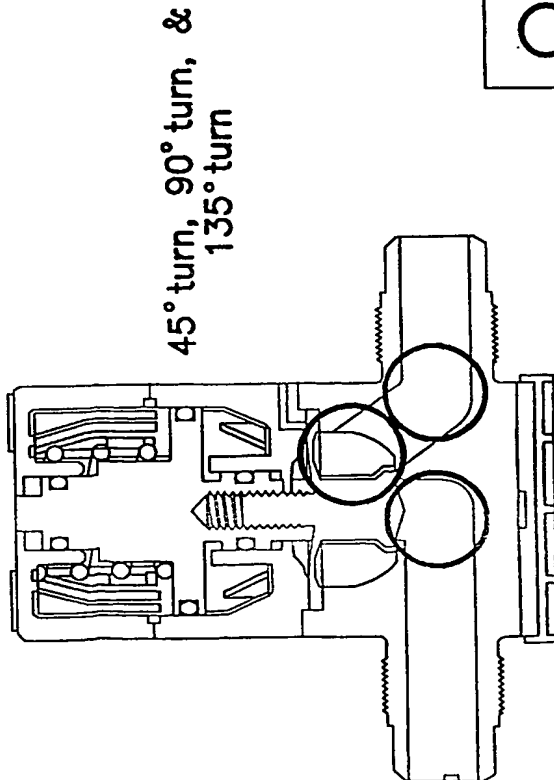


FIG. 27A
PRIOR ART

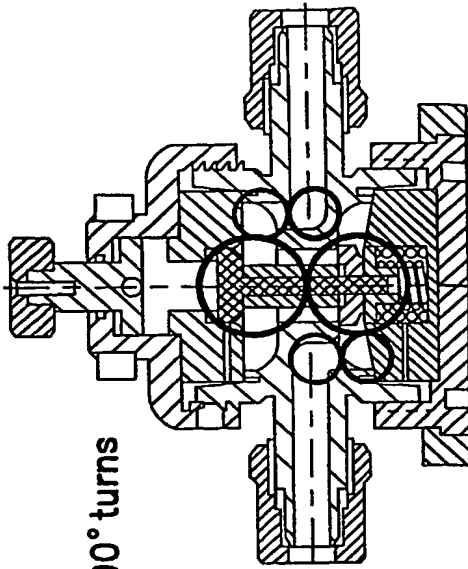


FIG. 27B
PRIOR ART

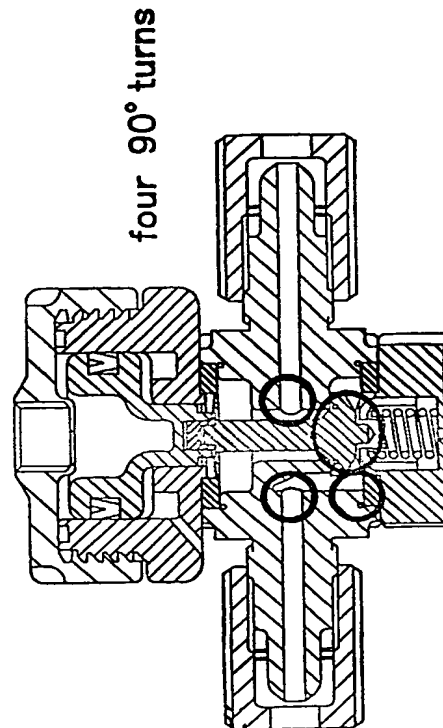
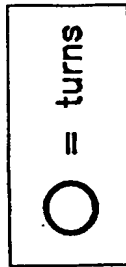


FIG. 27C
PRIOR ART

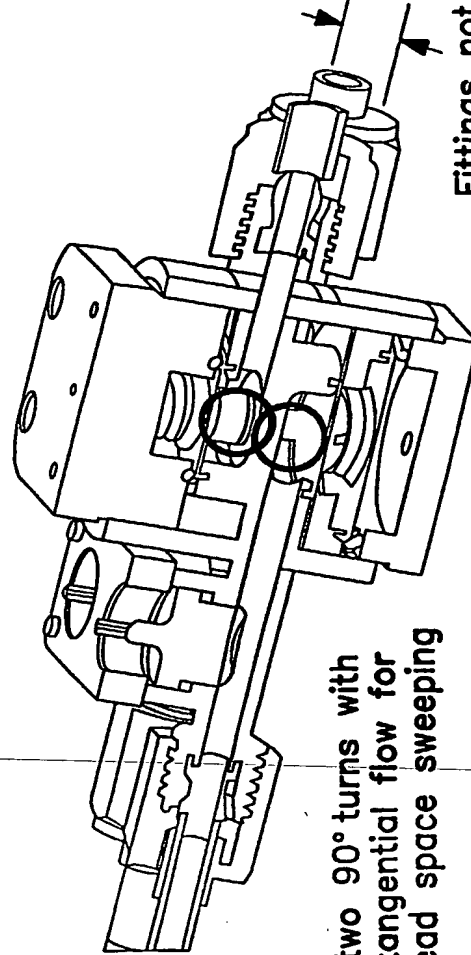


FIG. 27D

Fittings not
in-line

1/8 OPTIMIZER VALVE CROSS SECTION
VALVE IN 50% OPEN POSITION

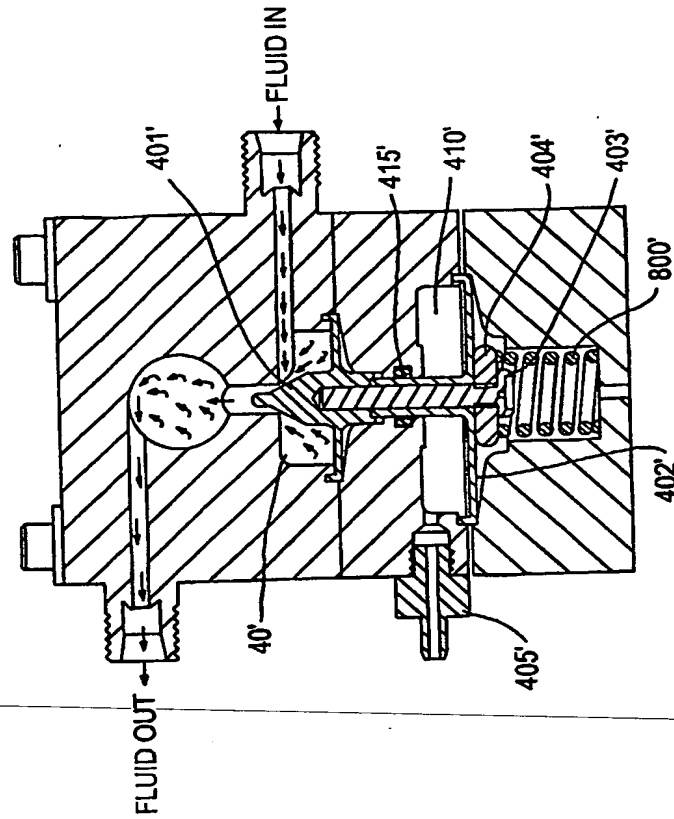


FIG. 28B

1/8 OPTIMIZER VALVE CROSS SECTION
VALVE IN CLOSED POSITION

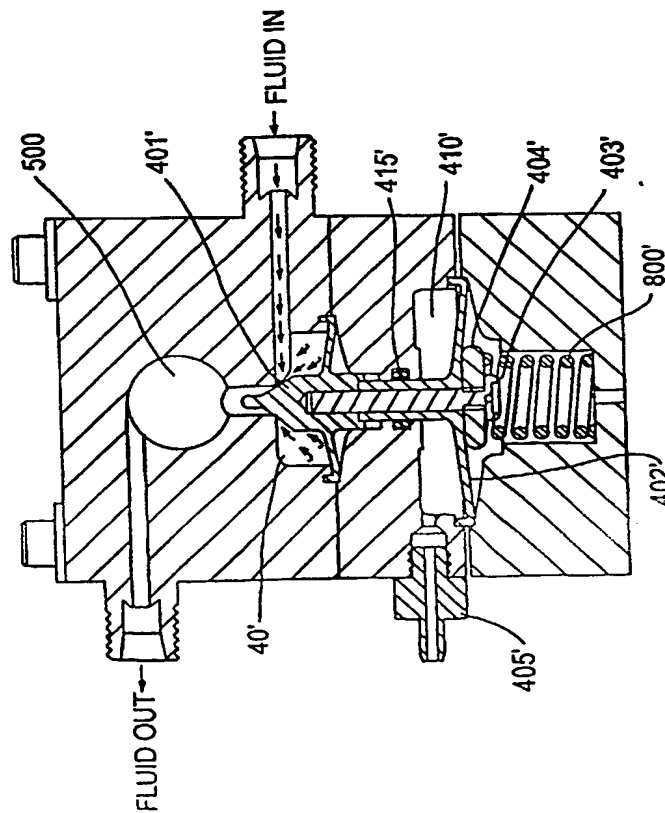


FIG. 28A

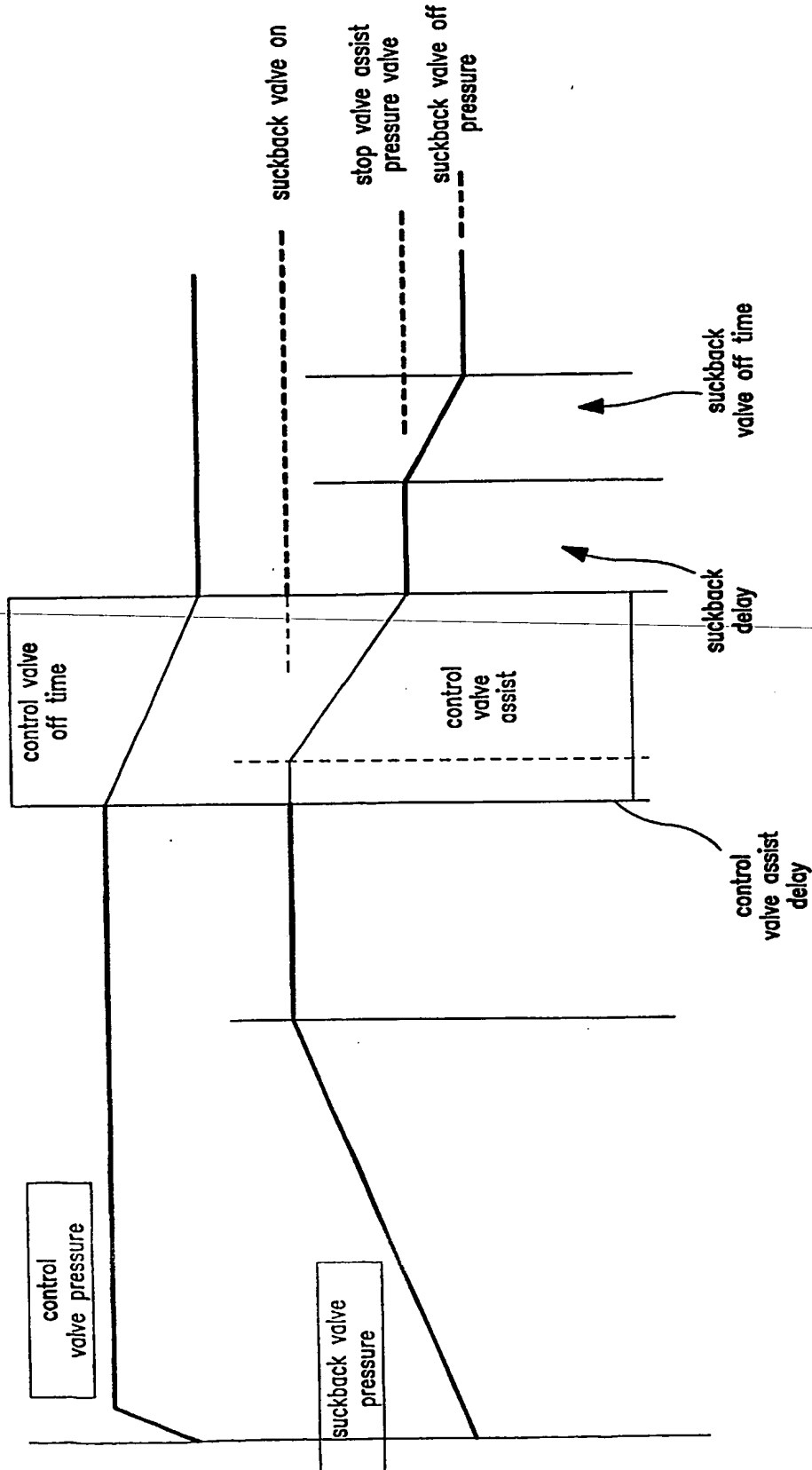


FIG. 29

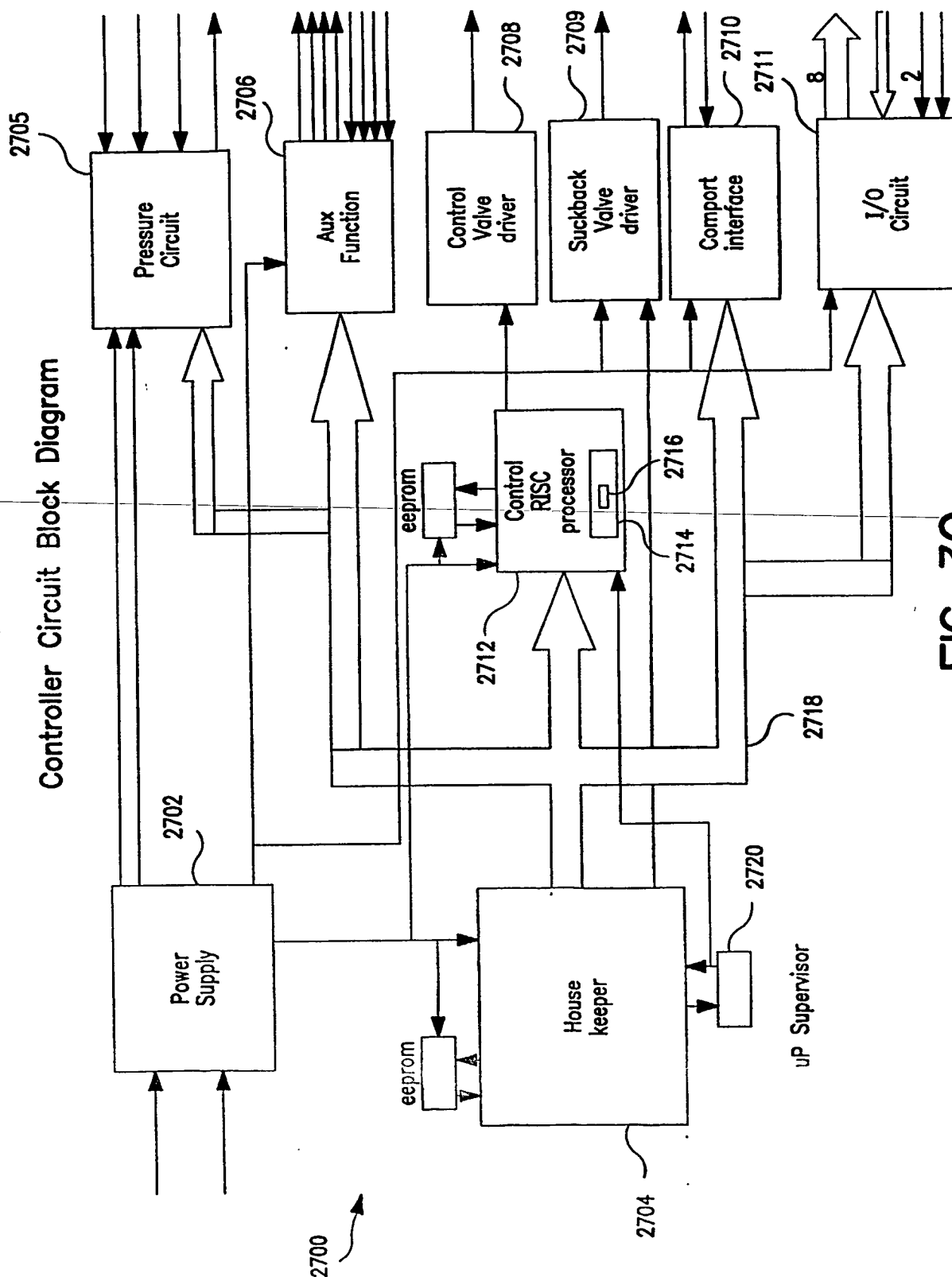


FIG. 30

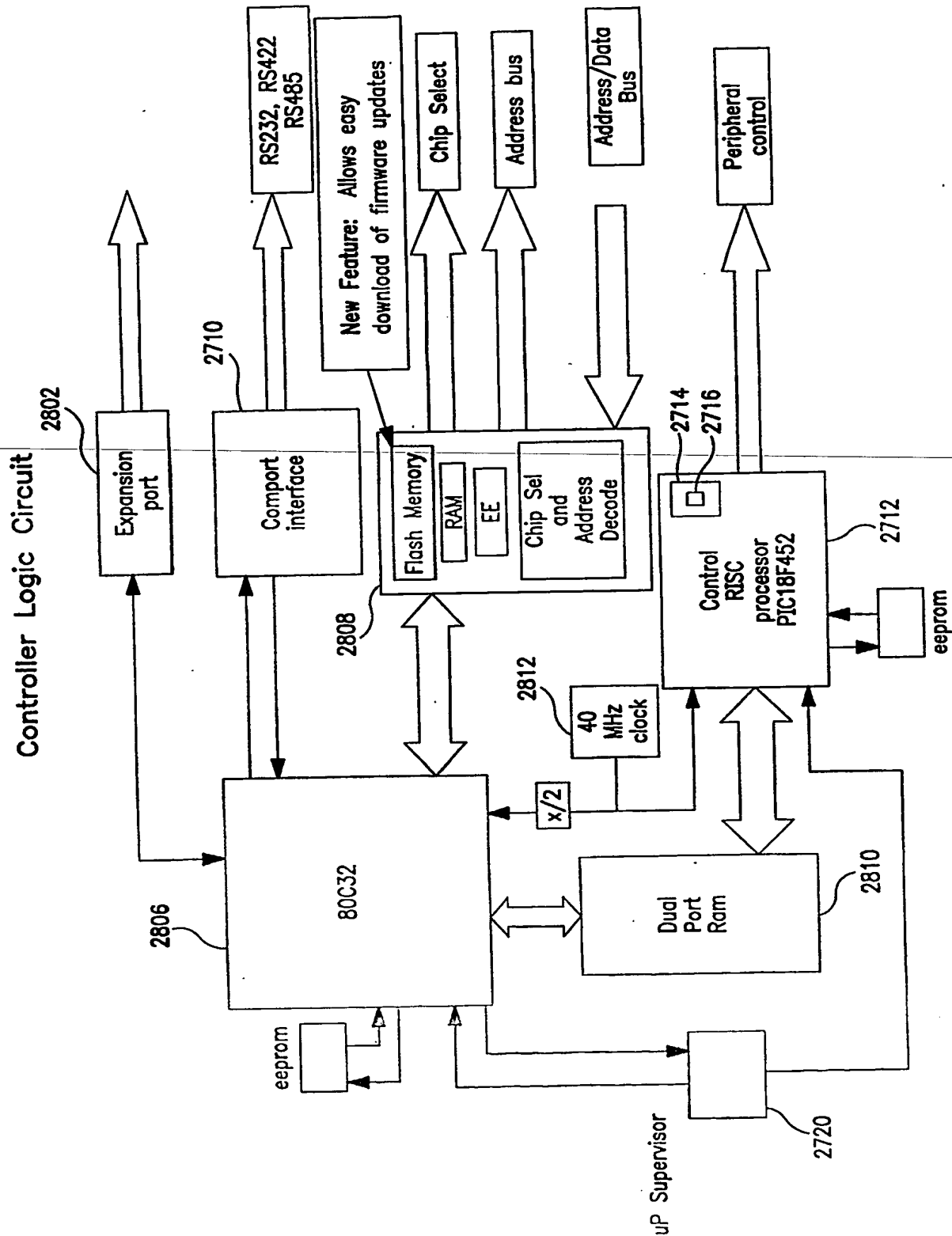


FIG. 31

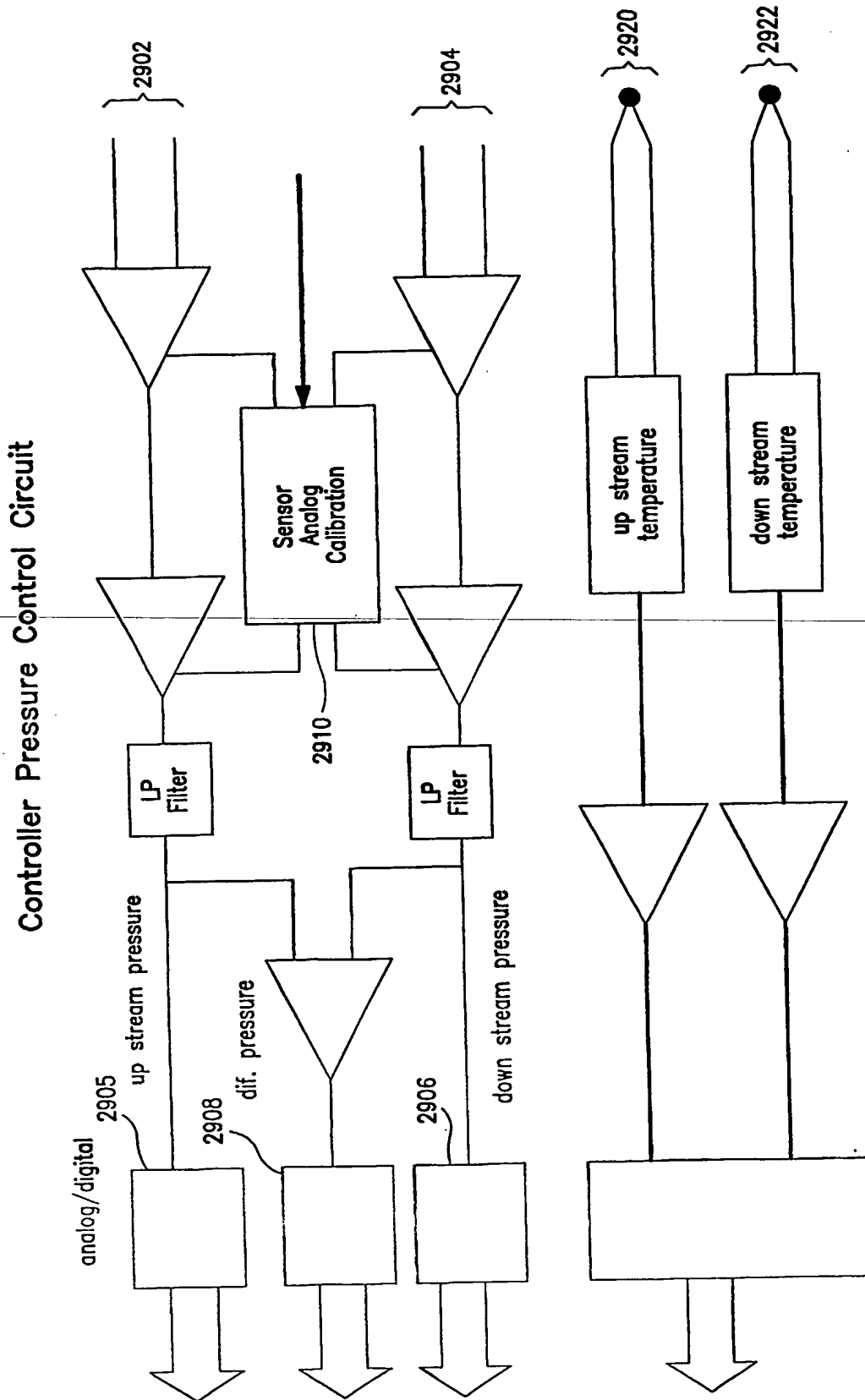


FIG. 32